

ration or complete development of these parts from the original cellular and pulpy state has never taken place. But with this explanation the word may still be retained, unless connate should be considered less exceptionable.

I have also assumed that ovula belong to the transformed leaf or carpel, and are not derived from processes of the axis united with it, as several eminent botanists have lately supposed. That the placentæ and ovula really belong to the carpel alone is at least manifest in all cases where stamina are changed into pistilla. To such monstrosities I have long since referred in my earliest observations on the type of the female organ in phænogamous plants\*, and since more particularly in my paper on *Rafflesia*†: the most remarkable instances alluded to in illustration of this point being *Sempervivum tectorum*, *Salix oleifolia* and *Cochlearia armoracia*, in all of which every gradation between the perfect state of the anthera and its transformation into a complete pistillum, is occasionally found.

XII.—*On the Structure of the Capsule of Papaveraceæ; and on the Nature of the Stigma of Cruciferæ.* By J. W. HOWELL, Esq., M.R.C.S.

*To the Editors of the Annals of Natural History.*

GENTLEMEN,

IN reference to your notes appended to my paper “On the Structure of the Stigma of the *Papaveraceæ*,” &c. in your last Number, wherein it would appear that I had been anticipated by M. Kunth, ‘*Flora Berolinensis*,’ published 1838, in the description of the apparently anomalous relation of the parietal placentæ to the stigmatic rays—permit me to observe, that my observations on this interesting subject were made in 1832.

In respect to your statement that “those of Mr. Howell’s observations which relate to the opposition of stigmata to placentæ in *Papaveraceæ*, and to the composition and cohesion of stigmata, had already been published by Dr. Brown in his account of *Cyrtandraceæ* in Horsfield’s ‘*Plantæ Javanicæ*,’” which work I have not yet seen, but have learned that it was published in 1840—justice to myself compels me to inform you, that the paper I sent you was published *verbatim* in the ‘*Bath and Cheltenham Gazette*’ in October 1840, and was sent for republication in the ‘*Annals*,’ from a conviction that the subject was new, and worthy of a more extended circulation than a local paper could ensure.

\* In Linn. Soc. Trans., vol. xii. p. 89.

† Ibid. vol. xiii. p. 212, note.

On any occasion I should esteem it an honour to find that my researches received the sanction of Dr. Brown's prior claim; it is to avoid the charge of plagiarism from the 'princeps botanicorum,' or from M. Kunth, that I trouble you with this explanation\*.

I am, Sir, yours obediently,

Bath, December 21, 1842.

JOHN WARREN HOWELL.

XIII.—*Observations on the Metamorphosis of an Annelide.*

By S. LOVÉN †.

[With a Plate.]

AMONGST the articulated animals the Annelides have without doubt been the least studied, notwithstanding the excellent researches which have recently been published by Milne-Edwards concerning them. Their development in particular is still almost quite unknown to us. The observation which I now present, although dismembered and imperfect, appears however to indicate, that, at least in the higher divisions of these animals, during their development, a metamorphosis takes place, which is almost as remarkable as that of insects.

Last August, as I was endeavouring to catch small marine animals with a fine draw-net, such as Entomostraca, &c., I at the same time unexpectedly obtained with these a great number of small lively creatures, which were so strange to me that I was unable to make out to what class they belonged. Fig. 1. (Plate I. B.) represents one magnified, in the form in which it first appeared after capture. The natural size amounted to about half a millimetre, and its structure seemed very simple. The most striking thing was a disc or oval ring (*a*), which bore upon its margin a row of vibrating cilia, and had a second smaller one over this; by the unceasing motion of these cilia the animal moved quickly to and fro, mostly progressing in an oblique direction.

On the side of this ring, which was usually directed upwards, the body rose towards the hinder part to a somewhat oblique hemisphere (*b*); the side generally opposed to it was also inflated (figs. 1, 2, 3, *c*), yet much less, and obliquely in front. On the upper side the mouth (*e*) appeared to be situated anteriorly near to the ring, the lips of which were provided with cilia. At the apex of this side was the anus (*h*), a small opening surrounded by a muscular ring. The whole was very transparent, and the course of the intestinal canal

\* [It was by no means our intention to question the undoubted originality of Mr. Howell's valuable observations, but merely to direct the attention of our readers to what had been done by other botanists on the same subject.—Ed.]

† Translated from the German in Wiegmann's Archiv, Part 3, p. 302: 1842.